

REMARKS

In the Office Action ("OA")¹ mailed July 29, 2005, the Examiner rejected claims 1-9 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,289,102 to Ueda et al. ("Ueda") in view of U.S. Patent No. 4,855,578 to Hirokawa et al. ("Hirokawa"). Applicants hereby cancel claims 5-8, without prejudice or disclaimer, amend claims 1-4 and 9, and add new claims 15 and 16. Support for the amendment of claims 1-4 and 9 and the addition of new claims 15 and 16 can be found throughout the Drawings and the Specification at, for example, Figures 4C, 5, 6, and 10-21, and on page 18, lines 6-26, page 22, line 2-page 24, line 9, and page 29, line 19-page 33, line 22. In view of the following remarks, Applicants respectfully traverse the Examiner's rejections of the claims under 35 U.S.C. § 103(a).

I. Response to Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claims 1-9 under 35 U.S.C. § 103(a) as unpatentable over Ueda in view of Hirokawa. To establish a prima facie case of obviousness, three basic criteria must be met. First, the prior art reference as modified must teach or suggest all the claim elements. (See M.P.E.P. § 2143.03 (8th ed. 2001)). Second, there must be some suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. (See M.P.E.P. § 2143 (8th ed. 2001)). Third a reasonable expectation of success must exist. Moreover, each of these requirement must "be

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

found in the prior art, and not be based on applicant's disclosure.” (M.P.E.P. § 2143.03 (8th ed. 2001)).

Applicants begin with a discussion of amended claim 1. Claim 1 recites a combination including:

generating, by the recording apparatus, a first random number and transferring the first random number to the memory card,
generating, by the recording apparatus, a first value from a first arithmetic function using the authentication information and the first random number,
generating, by the memory card, a second value from a second arithmetic function using the secret information and the first random number, and transferring the second value to the recording apparatus,
comparing, by the recording apparatus, the first value with the second value and transferring a first comparison result to the memory card,
generating, by the memory card, a second random number if the first comparison result indicates a match, and transferring the second random number to the recording apparatus,
generating, by the memory card, a third value from a third arithmetic function using the secret information and the second random number,
generating, by the recording apparatus, a fourth value from a fourth arithmetic function using the authentication information and the second random number, and transferring the fourth value to the memory card,
comparing, by the memory card, the third value with the fourth value and outputting a second comparison result,
generating, by the memory card, a first key from a fifth arithmetic function using at least the secret information and the second random number if the second comparison result indicates a match, and
generating, by the recording apparatus, a second key from a sixth arithmetic function using at least the authentication information and the second random number;

Applicants respectfully submit that Ueda does not disclose or suggest the combination of steps recited in amended claim 1. For example, Ueda does not provide a teaching of at least “executing mutual authentication between the recording apparatus and the memory card using the generated authentication information and the secret information,” as recited in amended claim 1.

The Examiner alleges that Ueda teaches “executing mutual authentication between the recording apparatus and the memory card removable recording medium using the generated authentication information and the second information, wherein executing the mutual authentication includes generating a random number in the

recording apparatus and transferring the random number to the memory card removable recording medium, generating a first function in the recording apparatus using the generated authentication information and the generated random number, generating a second function, by the arithmetic function of the memory card in the removable recording medium, using the generated second information and the transferred random number, and transferring the second function to the recording apparatus, and comparing the generated first function with the generated second function in the recording apparatus” (OA, pg. 3). Applicants respectfully disagree.

Although Ueda teaches a method for mutual authentication, Ueda does not disclose at least “executing mutual authentication between the recording apparatus and the memory card,” as recited in amended claim 1. Therefore, Ueda fails to teach or suggest all the elements recited in amended claim 1.

Next, the Examiner relied on Hirokawa to teach “a removable recording medium that is a memory card” (OA, pg. 3). Applicants respectfully submit that Hirokawa fails to cure the deficiencies of Ueda. For example, the memory card in Hirokawa also fails to teach “executing mutual authentication between the recording apparatus and the memory card,” as recited in amended claim 1.

Since Ueda and Hirokawa, taken alone or in combination, fail to teach the elements of amended claim 1, no prima facie case of obviousness has been established. For at least the foregoing reasons, Applicants submit that amended claim 1 is allowable over Ueda in view of Hirokawa and request withdrawal of the rejection of amended claim 1 under 35 U.S.C. § 103(a). Amended claims 3 and 9 and new claims 15-16, although different in scope, include elements similar to those of amended claim

1. Applicants therefore submit that amended claims 3 and 9 and new claims 15-16 are also allowable over Ueda for at least the reasons given with respect to amended claim 1.

Moreover, Applicants submit that amended claims 2 and 4 are allowable, not only for the reasons stated above with regard to their respective allowable base claims, but also for their own additional features that distinguish them from the cited references. Accordingly, Applicants request withdrawal of the rejection of amended claims 2 and 4 under 35 U.S.C. § 103(a) and the timely allowance of these pending claims.

II. Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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